

REMARKS

Applicants respectfully request reconsideration of this application. Claims 17-18 and 20-24 have been amended. Claims 1-16 were previously canceled without prejudice. Claims 25-36 were withdrawn. Claims 37-49 have been added.

Objections

Claims 17-24 were objected to due to informalities. Specifically, Examiner objected to independent claim 17. Claims 18-24 depend from claim 17. Applicants have amended claim 17 to correct the informalities and respectfully request withdrawal of the objection to claims 17-24.

Rejections under 35 USC § 102

Claims 17-21 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Quek* et al. (U.S. Patent No. 6,261,917). Additionally, claims 17, 19-20 and 22-24 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Adler* et al. (U.S. Patent No. 6,259,128).

Applicants respectfully submit that claims 17-21 include at least one limitation not disclosed nor suggested by *Quek*. Additionally, Applicants respectfully submit that claims 17, 19-20 and 22-24 include at least one limitation not disclosed nor suggested by *Adler*. Therefore, Applicants submit that claims 17-21 are not anticipated and are patentable over *Quek*, and that claims 17, 19-20 and 22-24 are not anticipated and are patentable over *Adler*.

In particular, independent claim 17 includes the limitation of “forming an electrode layer directly on the conductor structure.” *Quek* does not disclose this limitation.

Rather, *Quek* discloses that vias or contacts 20 may be formed through the insulating layer 16. A barrier metal layer 24 is deposited over the insulating layer 16. This barrier metal layer may comprise tantalum nitride. A metal layer is formed over the barrier metal layer. The metal layer 26 may comprise aluminum, copper, aluminum or copper alloy such as AlCu,

or the like. *Quek* states that the metal layer 26 will form the bottom plate electrode of the capacitor. (*Quek*, col. 2, lines 24-37). Therefore, in *Quek*, an electrode plate is formed over a barrier layer, which is formed over the insulating layer which includes vias or contacts. (See, *Quek*, Figure 6). *Quek* does not disclose “forming an electrode layer directly on the conductor structure.”

Therefore, *Quek* fails to disclose or suggest Applicants’ claimed limitations. Accordingly, *Quek* does not anticipate independent claim 17. Claims 18-21 depend, directly or indirectly, from the foregoing independent claim. Therefore, *Quek* fails to anticipate claims 18-21 for at least the reasons discussed above with respect to claim 17. Withdrawal of the rejection is respectfully requested.

Additionally, *Adler* also does not disclose the limitation of “forming an electrode layer directly on the conductor structure.” Rather, *Adler* discloses that a silicon nitride (Si_3N_4) layer 30 is provided over the copper damascene layer 20, 21 and the semiconductor substrate 10. (*Adler*, col. 2, lines 49-51). A barrier layer 40 such as tantalum nitride (TaN) may be formed over the silicon nitride layer 30. (*Adler*, col. 2, lines 59-60). *Adler* states that a bottom electrode 50 such as a thin layer of aluminum (Al), tungsten (W) or other suitable metal may then be formed over the barrier layer 40. (*Adler*, col. 2, line 66 to col. 3, line 1). Therefore, in *Adler*, bottom electrode 50 is formed over barrier layer 40 which is formed over copper damascene layer 20, 21. *Adler* does not disclose “forming an electrode layer directly on the conductor structure.”

Therefore, *Adler* also fails to disclose or suggest Applicants’ claimed limitations. Accordingly, *Adler* does not anticipate independent claim 17. Claims 19-20 and 22-24 depend, directly or indirectly, from the foregoing independent claim. Therefore, *Adler* fails to anticipate claims 19-20 and 22-24 for at least the reasons discussed above with respect to claim 17. Withdrawal of the rejection is respectfully requested.

CONCLUSION

Applicants respectfully submit the present application is in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call Ms. Van Nguy at (408) 720-8300 x228.

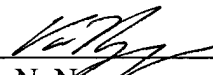
Pursuant to 37 C.F.R. 1.136(a)(3), Applicants hereby request and authorize the U.S. Patent and Trademark Office to (1) treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time and (2) charge all required fees, including extension of time fees and fees under 37 C.F.R. 1.16 and 1.17, to Deposit Account No. 02-2666.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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Van N. Nguy
Reg. No. 55,851

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, CA 90025
(408) 720-8300